Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) An adaptive equalizer for equalizing a signal, the adaptive equalizer comprising:

a feed-forward equalizer (FFE) to receive an input signal and generate a partially equalized signal from the input signal based on a plurality of coefficients associated with the feed-forward equalizer (FFE);

a slicer to receive the partially equalized signal and generate decoded bit values based on the partially equalized signal;

a signal quality circuit to receive the partially equalized signal from the feed-forward equalizer (FFE) and measure error in the partially equalized signal; and

a convergence algorithm circuit to use a convergence algorithm for adjusting ~~adjust~~ the coefficients associated with the feed-forward equalizer (FFE) based on the error measured in the partially equalized signal by the signal quality circuit,

wherein values of the coefficient are not ~~used~~ needed by the convergence algorithm ~~circuit~~ to determine how much to adjust of the coefficients associated with the feed-forward equalizer (FFE).

2. (Previously Presented) The adaptive equalizer of claim 1, wherein the feed-forward equalizer (FFE) comprises a fractionally spaced transversal filter.

3. (Previously Presented) The adaptive equalizer of claim 2, wherein the feed-forward equalizer (FFE) further comprises a plurality of delay stages, each delay stage delaying the input signal by a fraction of a bit time and multiplies the input signal by a given coefficient associated with the feed-forward equalizer (FFE).

4. (Previously Presented) The adaptive equalizer of claim 1, further comprising an analog gain control circuit to receive a data input signal and generate the input signal for input to the feed-forward equalizer (FFE).

5. (Previously Presented) The adaptive equalizer of claim 1, wherein the signal quality circuit comprises three comparators to respectively compare the partially equalized signal from the feed-forward equalizer (FFE) to a binary high (V1), a binary low (V0), and a mid-level (VM) that is the same as an output of the slicer to determine whether an amplitude of the output of the slicer is too high or too low.

6. (Previously Presented) The adaptive equalizer of claim 5, wherein the amplitude of the output of the slicer is determined to be too low when:

the partially equalized signal from the feed-forward equalizer (FFE) is higher than the mid-level (VM) but lower than the binary high (V1); and

the partially equalized signal from the feed-forward equalizer (FFE) is lower than the mid-level (VM) but higher than the binary low (V0).

7. (Previously Presented) The adaptive equalizer of claim 6, wherein convergence algorithm circuit further adjusts the coefficients of the feed-forward equalizer (FFE) such that a pre-determined percentage of the decoded bit values are determined to be too low.

8. (Currently Amended) A method for equalizing a signal, the method comprising:

generating a partially equalized signal from an input signal based on a plurality of coefficients associated with a feed-forward equalizer (FFE);

generating decoded bit values based on the partially equalized signal, the decoded bit values being an equalized output signal;

measuring error in the partially equalized signal; and

using a convergence algorithm to adjust ~~adjusting~~ the coefficients associated with the feed-forward equalizer (FFE) based on the error measured in the partially equalized signal,

wherein values of the coefficient are not needed by the convergence algorithm to determine how much ~~used~~ to adjust of the coefficients associated with the feed-forward equalizer (FFE).

9. (Previously Presented) The method of claim 8, further comprising comparing the partially equalized signal from the feed-forward equalizer (FFE) to a binary high (V1), a binary low (V0), and a mid-level (VM) that is the same as the equalized output signal to determine whether an amplitude of the equalized output signal is too high or too low.

10. (Previously Presented) The method of claim 9, wherein adjusting the coefficients of the feed-forward equalizer (FFE) further includes adjusting the coefficients of the feed-forward equalizer (FFE) such that a pre-determined percentage of the decoded bit values are determined to be too low.